

In re Patent Application of:

SHI ET AL

Serial No. 09/891,886

Filed: 06/26/2001

IN THE CLAIMS

1. (currently amended) A test meter for a digital signal distribution system comprising:
 - a front end for acquiring a digital signal carried by the digital signal distribution system;
 - signal conditioning circuitry having a plurality of signal conditioning circuits, each signal conditioning circuit corresponding to a different digital CATV standard in a plurality of digital CATV standards, the signal conditioning circuitry being in communication with said front end so as to receive the acquired digital signal and operative to output a digital channel signal by applying the acquired digital signal to the signal conditioning circuit that corresponds to the digital CATV standard for the acquired digital signal, wherein the digital channel signal has a bandwidth set by the corresponding digital CATV standard;
 - a digital demodulator in communication with said signal conditioning circuitry and operative to select one demodulation scheme from a plurality of digital demodulation schemes to obtain a demodulated signal from the digital channel signal after signal conditioning;
 - a means for analyzing at least one parameter of the demodulated signal to produce an analysis output including at least one of message error rate MER, I/O data constellation, equalizer tap values and forward error correction FEC readings; and
 - a user interface operative to allow a user to select the digital CATV standard and to receive the analysis

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output containing at least one of video information,
audio information, a composite bitstream, closed
captioning information and ratings information for
display to a user.

2. (previously presented) The test meter of Claim 1, wherein the plurality of digital CATV standards comprise ITU-T J.83 Annex A, Annex B, and Annex C and the plurality of digital demodulation decoding schemes comprise QAM and QAM variants.

3. (previously presented) The test meter of Claim 1, wherein said plurality of signal conditioning circuits comprises a first filter that filters the acquired digital signal in accordance with a first digital CATV standard and a second filter that filters the acquired digital signal in accordance with a second digital CATV standard.

4. (previously presented) The test meter of Claim 3, wherein said first filter comprises a SAW filter operative to filter a first bandwidth according to the first digital CATV standard, and said second filter comprises a SAW filter operative to filter a second bandwidth according to the second digital CATV standard.

5. (previously presented) The test meter of Claim 4, wherein said first digital CATV standard comprises ITU-T J.83 Annex A and said second digital CATV standard comprises ITU-T J.83 Annex B.

6. (previously presented) The test meter of Claim 1, wherein the user interface is operative to allow a user to select one digital channel signal.

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7. (cancelled)

8. (previously presented) The test meter of Claim 1, wherein said user interface is operative to allow a user to select one digital modulation decoding scheme from the plurality of digital demodulation decoding schemes.

9. (previously presented) The test meter of Claim 8, wherein the plurality of digital demodulation decoding schemes includes QAM and QAM variants.

10. (currently amended) A test meter for performing signal analysis on a digital cable television system comprising:

a front end operative to obtain a digital CATV signal from a point in the digital cable television system;

signal conditioning circuitry having a plurality of signal conditioning circuits, each signal conditioning circuit corresponding to one digital CATV standard in a plurality of digital CATV standards, the signal conditioning circuitry in communication with said front end so as to receive the obtained digital CATV signal and operative to selectively apply to said obtained digital CATV signal the signal conditioning circuit in the plurality of signal conditioning circuits that corresponds to the digital CATV standard for the obtained digital CATV signal to obtain a digital CATV standard signal;

a digital demodulator in communication with said signal conditioning circuitry so as to receive said digital CATV standard signal and operative to selectively apply one demodulation scheme from a plurality of digital demodulation schemes to obtain a demodulated bitstream signal;

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selection circuitry in communication with said signal conditioning circuitry and said digital demodulator and operable in dependence upon selection by a user to select a digital CATV standard from the plurality of digital CATV standards for application by said signal conditioning circuitry and to select a digital demodulation scheme from the plurality of digital demodulation schemes for application by said digital demodulator; and

means for analyzing at least one parameter of the demodulated bitstream signal ~~obtained digital CATV signal~~ and presenting analysis results including at least one of message error rate MER, I/O data constellation, equalizer tap values and forward error correction FEC readings at an output.

11. (cancelled)

12. (previously presented) The test meter of Claim 10, wherein said plurality of signal conditioning circuits includes a filter for each digital CATV standard in the plurality of digital CATV standards.

13. (previously presented) The test meter of Claim 12, wherein said plurality of signal conditioning circuits include a first filter for conditioning the obtained digital CATV signal in accordance with a first digital CATV standard and a second filter for conditioning the obtained digital CATV signal in accordance with a second digital CATV standard.

14. (previously presented) The test meter of Claim 13, wherein said first filter is a SAW filter corresponding in bandwidth to

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an ITU-T J.83 Annex A digital CATV standard, and said second filter is a SAW filter corresponding in bandwidth to a an ITU-T J.83 Annex B digital CATV standard.

15. (previously presented) The test meter of Claim 10, wherein the plurality of digital demodulation decoding schemes includes QAM and QAM variants.

16. (currently amended) A method of analyzing a digital signal carried by a digital signal distribution system, comprising:

coupling a test meter to a point in the digital signal distribution system;

obtaining via the test meter a digital signal carried by the digital signal distribution system;

selecting in dependence upon a user's input from a user interface via the test meter a digital CATV standard from a plurality of digital CATV standards to apply to the obtained digital signal;

applying via the test meter the selected digital CATV standard to the obtained digital signal to obtain a digital CATV standard signal;

selecting in dependence upon a user's input from a user interface via the test meter a demodulation scheme from a plurality of demodulation schemes to apply to the digital CATV standard signal;

applying via the meter the selected demodulation scheme to the digital CATV standard signal to obtain a demodulated signal;

performing analysis on parameters associated with the demodulated signal; and

presenting at an output results of the parameter analysis—~~at an output~~ readings including at least one of message error rate

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MER, I/O data constellation, equalizer tap values and forward error correction FEC.

17. (previously presented) The method of Claim 16, wherein the plurality of digital CATV standards includes ITU-T J.83 Annex A, Annex B, and Annex C.

18. (previously presented) The method of Claim 16, wherein the plurality of demodulation schemes includes QAM and QAM variants.

19. (cancelled).